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| SERIAL NUMBER | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|---|---|---|---|
| 08/530,661 | 09/20/95 | KEETH B | ~~M122-356~~ |

B5M1/0923

WELLS, ST. JOHN ROBERTS, GREGORY
& MATKIN P.S.
601 W. FIRST AVENUE, SUITE 1300
SPOKANE WA 99204-0317

| EXAMINER | |
|---|---|
| KELLER | |
| **ART UNIT** | **PAPER NUMBER** |
| 2503 | |

09/23/97

**DATE MAILED:**

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 6/25/97 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-27 are pending in the application.
   Of the above, claims 1-5, 11-17, 20-21, 24, 27 are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 6-10, 18-19, 22-23 and 25-26 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

PTOL-326 (Rev. 2-93)

Claims 1-27 are pending in this application. Claims 1-5, 11-17, 20-21, 24, and 27 stand withdrawn from further consideration by the examiner.

Claims 6-10, 18-19, 22-23, and 25-26 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The improved structure is claimed with respect to overall memory size and device density. The disclosure is in terms of various improvements which make possible the production of applicant's claimed structure. Use of one or more of these improvements is thus critical or essential to the practice of the invention. Since these improvements are not included in the claim(s), the claimed structure is not enabled by the disclosure. *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Specifically, applicant discloses techniques to reduce the size of bird's beaks, to increase capacitance, to improve mask alignment, to eliminate field oxide regions, etc. Use of one or more of these techniques is necessary to achieve the claimed device density. Since it is the use of these very techniques which results in applicant's ability to produce the claimed structure, applicant's claims must include the structural features of the improved techniques. Such features might be the size of the bird's beak, the capacitance of cells, the irregular surface of the capacitor electrodes, etc. Since the presence of these features is essential to existence of applicant's structure, these features (or others) must be claimed in order for the claimed structure to be enabled.

**Response to Remarks**

Applicant's remarks have been considered and found persuasive except as they relate to the 35 U.S.C. § 112(1) rejection.

Applicant contends that none of the disclosed improvements are necessary to the practice of applicant's claimed invention. As evidence of the this applicant points to the specification where applicant indicates that other techniques can be used to produce the claimed structure. Applicant's saying this is so does not make it so.

Applicant's disclosure is interpreted from the point of view of those skilled in the art. Applicant's position, as made clear in his remarks, is that the recited densities were not attained by those skilled in the art prior to applicant's filing of the instant application. Indeed, applicant has overcome the 35 U.S.C. §103(a) rejection by persuasively arguing that while the concept of memory devices having increased density is known in the art, only applicant has been able to produce to the claimed device. Applicant's specification describes to those skilled in the art how such densities are achieved. As such, the disclosed improvements are the nexus between those skilled in the art and their ability to produce the claimed invention. Applicant may be aware of some other way to produce the claimed device, but the non-obviousness of applicant's claimed structure rests on applicant's allegation that those skilled in the art could only produce the claimed structure after reading applicant's specification. If this is so, then the use of at least one of the disclosed improvements is essential to production of the claimed device.

Put another way, if the combination of a prior art 16M memory with the known desire to make such a memory as dense as possible has insufficient enablement to result in a 35 U.S.C. §103(a) rejection, then applicant's claims which recite basic structure and density also lack proper enablement. One skilled in the art could not produce the claimed device without employing one of applicant's disclosed improvements. As such, at least one of these improvements is essential to the practice of applicant's invention and so must be claimed. If, as applicant seems to argue, one skilled in the art could produce the claimed invention without the use of one of applicant's disclosed improvements, then applicant's claimed structure is obvious.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Kelley whose telephone number is (703) 305-3789.

The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

N. Kelley

September 18, 1997